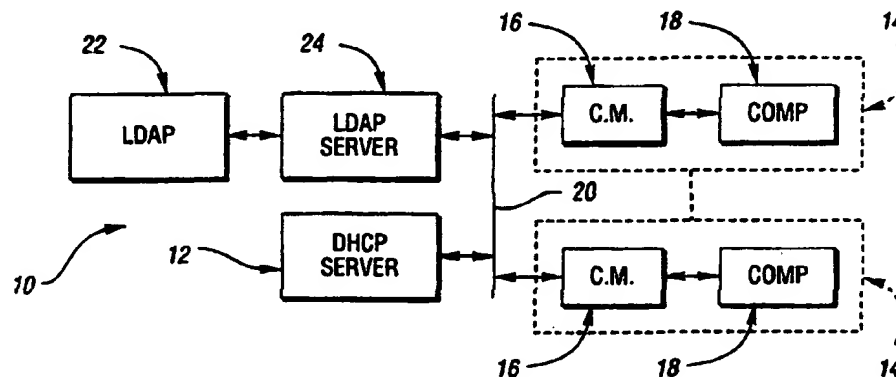




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(54) Title: METHOD AND SYSTEM FOR AUTOMATIC ALLOCATION OF RESOURCES IN A NETWORK



## (57) Abstract

In a broadband cable data network (10), a method and system for automatically allocating network resources such as IP addresses to control access to the network utilizes at least one DHCP server (12), and a common network database formed from a LDAP directory (22) for storing respective user configuration parameters, hardware address registration, and current binding information. A DHCP server (12) can add new hardware address registrations to the LDAP using an "unregistered" service class. The DHCP server sends a DHCP reply tailored for unregistered devices, such as by allocating a privately-allocated IP address with no Internet access, or an IP address for a self-provisioning web server. A DHCP server views IP address allocation as having a short duration. Thus, if the IP network configuration does not change, user terminal will continue to receive the same allocated IP address due to the DHCP server's perception of an indefinite lease. The consistency of the IP addresses simplifies many operational concerns about dynamic addresses, such as minimizing DNS (domain name service) hostname updates, mapping IP addresses to user terminals during security incidents, etc.